

Application No. 10/618,112
Amendment dated September 23, 2005
Reply to Final Office Action of July 19, 2005

Docket No. 1232-5081

Amendments to the Claims:

Claims 1-16 are pending in this application. Claims 1 and 14 are independent.

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1 (CURRENTLY AMENDED): A measuring device, comprising:

a diffraction grating for diffracting ~~incident light to resolve the light into a~~ plurality of diffraction lights having different orders;
~~a first detecting means detector for measuring detecting an intensity of a predetermined diffraction light of a predetermined order, of the said plurality of diffraction lights, which is not being reflected by an object to be measured; and~~

~~a second detecting means detector for measuring an intensity of a diffraction light of an order different from the predetermined order, of said plurality of diffraction lights, which is being reflected by the object to be measured other than the diffraction light received by said first detecting means, and being reflected by an object to be measured,~~

~~wheren a result of measurement by said second light detecting means is corrected using a result of measurement by said first detecting means.~~

2 (CURRENTLY AMENDED): A measuring device according to claim 1, wherein the diffraction light to be detected by said second detecting means detector is zero-th order diffraction light diffracted by said diffraction grating.

3 (PREVIOUSLY PRESENTED): A measuring device according to claim 1, further comprising a spectroscope for making the light to be projected upon said diffraction grating, into

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approximately monochromatic light.

4 (CURRENTLY AMENDED): A measuring device according to claim 1, further comprising a condensing mirror provided between said diffraction grating and said first detector detecting means.

5 (ORIGINAL): A measuring device according to claim 4, wherein said condensing mirror comprises one of a concave-surface toroidal mirror, a cylindrical mirror, a spherical mirror, and a revolutionally elliptical-surface mirror.

6 (CURRENTLY AMENDED): A measuring device according to claim 4, wherein, in a plane containing central axes of incident light and reflected light upon and from said condensing mirror, said diffraction grating and said first detector detecting means are approximately conjugate with each other with respect to the condensing mirror.

7 (ORIGINAL): A measuring device according to claim 1, wherein said diffraction grating is a plane diffraction grating of laminar type or blaze type.

8 (PREVIOUSLY PRESENTED): A measuring device according to claim 3, wherein the approximately monochromatic light is one of EUV light, soft x-rays, and x-rays.

9 (ORIGINAL): A measuring device according to claim 3, further comprising a curved-surface reflection mirror disposed between said spectroscope and said diffraction grating.

10 (PREVIOUSLY PRESENTED): A measuring device according to claim 9, wherein, in a plane containing central axes of incident light and reflected light upon and from said curved-

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surface reflection mirror, an exit pupil of said spectroscope and said diffraction grating are approximately conjugate with each other with respect to said curved surface reflection mirror.

11 (CURRENTLY AMENDED): A device according to claim 1, wherein a change in a result of measurement of said second detecting means due to a change in an intensity of rays emitted from a light source and incident on said diffraction grating is compensated using a result of measurement of said first detector detecting means.

12 (CURRENTLY AMENDED): A device according to claim 1, further comprising a concave reflection mirror, disposed between said diffraction grating and said first detector detecting means for providing a conjugate relation between said diffraction grating and said first detector detecting means, wherein the incident light comprises a plurality of different wavelengths.

13 (CANCELLED):

14 (CURRENTLY AMENDED): A measuring device [[,]] according to claim 1 further comprising [[:]]

~~a diffraction grating for diffracting incident light to resolve the light into a plurality of diffraction lights having different orders;~~

~~first detecting means for measuring an intensity of a predetermined diffraction light, of the plurality of diffraction lights;~~

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~~second detecting means for measuring an intensity of a diffraction light other than the diffraction light received by said first detecting means, and being reflected by an object to be measured; and~~

~~a concave reflecting mirror, disposed between said diffraction grating and said first detecting means detector, for providing a substantial substantially conjugate relation relationship between said diffraction grating and said first detector detecting means;~~
~~wherein the incident light comprises a plurality of different wavelengths.~~

15 (CURRENTLY AMENDED): A device according to claim 14, wherein zero-th order diffraction light emergent from said diffraction grating is directed to said second detector detecting means.

16 (CANCELLED):